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Genetic Structure Of Coffea canephora Pierre Species Assessed By Microsatellites Markers

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Coffee is one of the most important cash crops for numbers of countries in the intertropical zones all over the world. *Coffea canephora* is responsible for about 35% of the total world production of coffee. Natural area of this species corresponds to the actual zone of tropical rainforest in Africa.

In order to better assess genetic resources and natural history of this species, we analysed a sample of 285 individuals from different sampling points on the repartition area, including some cultivated genotypes. A set of 39 nuclear microsatellites markers was genotyped in order to investigate species genetic structure and population history. An integrate approach combining both distances (factorial analysis) and bayesian model (Structure) methods was used to study the species structure. We shown that 2 major groups can be clearly discriminated, those two groups correspond to previous work led by Berthaud. However a finest structure has been shown, dividing the previous groups in a total of 6 groups, whereas previous studies have shown 5). We tried to investigate those groups history by computing the dm^2 statistic of Goldstein in our sample. Results show the possible effect of glaciation refuge areas on the elaboration of the *Coffea canephora* genetic structure, separating a guinean region composed by 2 groups and a Congolese one composed by four groups.

Consequences on species actual diversity and breeding are discussed.

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